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MEMORANDUM

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HSM-02045

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SUBJECT: ISSUE PAPER ON IMPROVING WH&S NOTIFICATION OF PESTICIDE-RELATED ILLNESSES AND EXPOSURE INCIDENTS

Issue

Worker Health and Safety Branch (WH&S) investigations of pesticide exposure and illness incidents are hampered by the lack of timely and consistent notification. Establishing procedures to improve the notification process will assist WH&S in evaluating, assessing, and mitigating workplace safety hazards.

Introduction

The Department of Pesticide Regulation (DPR) is responsible for ensuring the safety of the pesticide work place¹ (3 CCR). DPR's 2001 strategic plan² underscores the importance of assuring that people, especially workers and sensitive populations, are protected from unacceptable pesticide risks by establishing objectives to:

- Improve the assessment of human and environmental health risks as part of the regulatory process,
- Improve our ability to continuously evaluate the human and environmental health risks of pesticides, and
- Assess the acute and chronic health effects of persons who handle pesticides or come in contact with pesticide residues.

DPR's role includes assuring compliance with applicable rules and regulations, implementing and evaluating mitigation measures to reduce pesticide exposures, and investigating human effects incidents involving pesticide exposure, illness, or injury. Investigations are crucial in compiling data and other information to evaluate the effectiveness of DPR's regulatory program. Comprehensive and effective investigations require that DPR branches, regional offices (ROs) and the county agricultural commissioners (CACs) implement an integrated approach to notification, communication and response when human illness and exposure incidents occur. This memo addresses communications issues which hinder WH&S' role in investigations, describes the steps DPR has adopted to correct them, and proposes strategies for further process improvements.



Background

CACs are responsible for investigating all human effects incidents in their county to determine what happened and whether violations occurred¹. WH&S is responsible for investigating episodes of human effects and incidents involving workplace safety concerns to assess the magnitude of exposures and factors contributing to exposures. This information is used to develop appropriate stratagems for evaluating, measuring, and/or mitigating exposure.

DPR's Enforcement Branch (ENF) and WH&S are available to assist the CACs in their investigations, and have typically provided such assistance in response to selected incidents meeting US EPA priority criteria for human effects (priority episodes)³. In coordination with the CAC and ENF, WH&S also conducts their own investigations of selected episodes involving workplace safety issues. WH&S also establishes annual priorities for Branch involvement in investigating⁴ pesticide-related exposures or illnesses. These priorities may pertain to both priority episodes and non-priority episodes.

In 1999, DPR identified deficits contributing to ineffective evaluations of occupational safety. DPR's Enforcement Initiative Process⁵ identified potential deficiencies in the pesticide episode investigation and reporting process. The People and Pesticides Quality Team⁶, formed to evaluate systems for improving DPR and CAC responsiveness to public concerns about pesticides, made several recommendations for improved communications within and among DPR branches and between DPR and the CACs. The recommendations were targeted to provide a fully operational communication system to facilitate the internal flow of information by capturing the important issues quickly and shortening the time frame for getting information to the right person(s) or to the most people.

DPR initiated several process improvements in response to these findings and recommendations. In the fall of 1999, WH&S and ENF staff established priorities for resolving a variety of issues related to pesticide illness and incident investigations, including policies, processes and methods, and communication and coordination. Thus far, WH&S and ENF have accomplished the following in addressing the above issues:

- ENF and WH&S jointly revised the Pesticide Episode Investigation Procedures Manual⁷ (PEIP Manual) in 2000, which provides guidance for investigating human effects incidents meeting US EPA priority episode criteria⁶. Throughout 2000 and 2001, DPR staff trained CAC on the updated procedures.
- In 2001, using criteria derived from the requirements in the PEIP Manual, WH&S' Pesticide Illness Surveillance Program (PISP) evaluated 376 CAC investigations of agricultural use-related exposure episodes to determine the completeness of the Pesticide Episode Investigation Reports⁸ (PEIR). They found that about 40% of the PEIRs lacked complete information and about 20% had either very minimal or missing data. Much of the information missing in the PEIRs pertained to occupational safety issues.

- In 2002, WH&S and ENF conducted training to resolve the PEIR deficiencies.
- In 2002, WH&S and ENF jointly established policy (ENF 2002-003, WHS 02-02) to streamline the analytical process by specifying contacts and procedures for sample approval, sample submission, and updates on status⁹. The policy additionally provides sample collection guidelines to assist CACs in collecting the most appropriate samples for assessing human health effects.
- All CAC, RO and pertinent ENF staff contact numbers were downloaded into WH&S cell phones to facilitate communications regarding pesticide illnesses and incidents.
- WH&S established priorities for WH&S involvement in episode investigation for 2002 and distributed the information to ENF and DPR's CAC Liaison⁴.
- ENF established procedures to streamline the process for WH&S receipt of county illness investigation reports within 5 days of the RO receiving them¹⁰.
- WH&S established contracts with the California Poison Control System whereby the Poison Control Centers notify WH&S of pesticide-related illnesses on behalf of doctors who contact the Centers regarding an illness¹¹. This has been a significant source of case reporting, especially for non-occupational illnesses.

Causes Contributing to Lack of Timely and Consistent Notification

While significant improvements have been made, WH&S investigations of pesticide exposure and illness incidents continue to be hampered by the lack of timely and consistent notification. Without such notification, WH&S may lose the "window of opportunity" for sampling, observation and interview by which we evaluate the magnitude of potential pesticide exposure, reconstruct the exposure scenario and document occupational safety problems. Lack of consistent and timely notification is rooted in the following three causes:

1. WH&S and CACs/ENF have differing responsibilities and priorities in investigating pesticide incidents.

The role of the CACs and ENF is to ascertain the circumstances of the incident, determine whether laws and regulations were violated, and, if violations occurred, determine who was responsible. WH&S' role is to evaluate the circumstances and extent of exposure and determine whether an occupational safety problem contributed to the incident. These two roles, while distinct, often overlap. A better understanding of WH&S' role in investigations may facilitate our being notified when pesticide incidents occur.

2. The formal paper tracking system for priority episodes impedes prompt WH&S notification.

The current process for notifying DPR of priority episodes is mandated by the cooperative agreement between DPR, CACASA and the US EPA³. While the CAC begins an investigation immediately, there is typically a delay of up to several days between the time the CAC informs their RO of the incident and the time ROs disseminate a Pesticide Episode Transmittal Record (PETR) to ENF. Since WH&S is not in the initial notification loop, we

often do not learn of the episode until ENF forwards us a copy of the PETR. During this time, we may have missed critical opportunities to sample and reconstruct the exposure scenario. ENF's Central RO (CRO) has been informally notifying WH&S via e-mail when potential priority episodes occur. This strategy has been very effective in keeping WH&S informed of "breaking" incidents, tracking their status, and investigating on-site, as needed. ENF's other ROs do not use this informal notification system.

3. Illnesses which do not meet US EPA priority episode criteria lack a process for timely notification of WH&S. WH&S is interested in investigating certain non-priority illness and human effects incidents based on their sensitivity, visibility, and/or pertinence to ongoing illness and occupational safety evaluations⁴. Examples include drift, early entry violations, and irrigator exposure incidents. Collecting timely samples and other documentation is important in such cases. For most non-priority illnesses, WH&S activity begins when we receive the CAC's completed Pesticide Episode investigation Report (PEIR), which is typically several months following the incident.
4. There is no process for timely notification of WH&S when incidents occur which involve pesticide exposure but do not result in illness. There are generally two types of such exposure incidents: 1) those which do not result in illness, such as most school bus drift incidents, and 2) those in which illnesses are not reported initially, but develop in the days following exposure, after the opportunity to collect meaningful samples has passed. Examples of such incidents include asymptomatic workers pulled from fields when it is learned the REI was violated.

If these incidents do not trigger filing of a PEIR or a Complaint of Exposure, they are especially vulnerable to being overlooked. WH&S is interested in tracking and evaluating pesticide these exposure incidents in order to mitigate future exposures and prevent illnesses before they occur. Establishing a process for notifying WH&S of these incidents sooner will assist us in conducting effective and timely investigations.

Recommendations for Improvement

DPR needs to improve its strategies to resolve these issues so we can continue protecting the health and safety of Californians who work with pesticides or are exposed to pesticide residues. The following recommendations are proposed:

1. Recommendations to foster better understanding of WH&S' role in investigations:
 - WH&S will disseminate their annual investigation priorities among their own staff.
 - WH&S will present their annual investigation priorities to ENF, ROs and CAC via WHS letter and at Deputy/CACASA area meetings.
 - WH&S has drafted a manual, "Guidelines for Conducting WH&S Branch Investigations of Human Effects Incidents", to assist staff in consistently conducting effective investigations¹². Components include decision trees, procedures for notification, communicating and coordination among WH&S, ENF, ROs and CAC's, investigation strategies, and sampling and interview techniques. When finalized, WH&S will distribute the manual to ENF, ROs and CACs for use as a supplementary training and resource material to their PEIP manual.
2. Recommendations to assure WH&S is notified in a timely manner of priority episodes which meet our annual investigation priorities:
 - The critical link for priority episodes is the RO. Recent informal notification processes have enabled WH&S to respond to selected priority episodes in a timely manner. Establish a formal process whereby the RO notifies WH&S via e-mail when priority episodes occur which meet WH&S investigation priorities.
3. Recommendations to assure WH&S is notified in a timely manner of non-priority incidents and non-illness exposure incidents which meet our annual investigation priorities:
 - CAC-WH&S Notification -
 - a. WH&S will provide the CACs with their annual investigative priorities as addressed in item 1.
 - b. Evaluate the feasibility of implementing other mechanisms for notification. One option is defining WH&S' annual investigation priorities as "special incidents" subject to the priority notification process specified in the US EPA Cooperative Agreement, Appendix A³.
 - Poison Control Center-WH&S Notification –
 - a. Re-establish contracts or other agreements with the California Poison Control System to assure WH&S maintains this valuable source of notification.
 - b. Evaluate long-term, stable funding options for funding this source of notification.
 - Notification within WH&S and between WH&S, DPR and CACs – Disseminate incident reporting forms to WH&S staff to assure that notification is shared widely and promptly among Branch, DPR and CAC staff.

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